Inducible Laryngeal Obstruction (ILO)
Why you have trouble breathing: Information for teens

This handout covers questions about why you are having trouble breathing in, called Inducible Laryngeal Obstruction (ILO). We discuss how we test for it and treat it. ILO is also known as Paradoxical Vocal Fold Motion (PVFM) or Vocal Cord Dysfunction (VCD).

What is ILO?

When you have ILO, you have trouble breathing in. During normal breathing, our vocal folds move apart from each other when we breathe in, allowing air into the airway. The vocal folds move toward each other when we breathe out, during speech and when we cough. ILO has 1 key feature: during breathing, the vocal folds may try to close instead of staying open. There can be other places in the throat, which cause a narrowing in the airway as well. This squeezing makes the air passages smaller and makes it harder to pull air into the lungs. If there is more than one place in your throat that is tightening, it may take longer to figure out what works best to treat it.

To Learn More
• Speech and Language Services
  206-987-2104
• Ask your child’s healthcare provider
• seattlechildrens.org

Free Interpreter Services
• In the hospital, ask your nurse.
• From outside the hospital, call the toll-free Family Interpreting Line, 1-866-583-1527. Tell the interpreter the name or extension you need.
### Inducible Laryngeal Obstruction (ILO): Information for Teens

#### Symptoms of ILO

Symptoms of ILO include:
- Shortness of breath
- Throat tightness, chest tightness
- Wheezing or noisy breathing when inhaling (breathing in)
- Chronic coughing or throat clearing
- Mild hoarseness (weak, scratchy or breathy voice)

#### Is ILO the same as asthma?

No. ILO is very different from asthma. Asthma is caused by irritation and narrowing of air passages in the chest. **Patients with asthma tend to have more trouble breathing out, while patients with ILO have trouble breathing in.**

Some doctors may start to treat the symptoms of difficulty breathing as asthma and then prescribe asthma medicine when they actually have ILO. Because ILO is not asthma, this medicine may not help. If you have ILO but not asthma, you may be taking medicines you do not need. Some teens have both asthma and ILO. If you have both ILO and asthma, it can seem like the correct medicine does not work all the time.

#### What triggers ILO?

Triggers are things that set off or start your ILO symptoms. Asthma and ILO have similar triggers. A few common triggers are:
- Exercise
- Gastroesophageal Reflux Disease (GERD or heartburn or sour burps)
- Common cold (upper respiratory infection)
- Air pollution, smoke, e-cigarettes or vaping
- Stress or anxiety
- Mucus down the back of the throat (post-nasal drip)
- Cold air
- Singing or laughing
- Tight muscles in your throat

#### How do we diagnose ILO?

To diagnose ILO, we may:
- Talk to you about when symptoms happen. For example, is it noisy when you breathe in, when you breathe out or both? How often do you have a tight feeling throat? Do you struggle with breathing while exercising, during school, or each morning?
- Examine the muscles of the vocal folds when you are not having breathing difficulty. This is done with a small thin flexible camera and light (laryngoscope). It allows us to see whether the vocal folds are irritated, as well as determine if there are any other abnormalities that may explain the symptoms.
- View the muscles of the vocal folds with a laryngoscope when you are having breathing difficulty. This helps us see if the vocal folds or other structures are closing the airway when it should be open.
- Measure how much air is getting into your lungs when you are not having symptoms. We do this to see if your lungs are normal.
• Measure how much air is getting into your lungs when you are having symptoms. We do this to see if there is less air than usual moving in and out of the lungs.
• Observe how you use muscles in your neck, chest and stomach when you breathe.

Who will care for me?

A team of providers often treats ILO. For an accurate diagnosis and treatment, you may see the following specialists:

• Ear, nose and throat doctors (otolaryngologists) - look at your vocal folds and throat with a flexible telescope.
• Airway doctors (pulmonologists) - perform tests that measure the amount of air going in and out of the lungs.
• Speech-language pathologists (SLPs) - provide treatment and teach you different ways you can use the throat muscles to open the airway.
• Mental health therapists (psychologists) - help reduce the anxiety or stress caused by breathing difficulty.
• Respiratory therapists - help evaluate your lungs during exercise.
• Heart doctors (cardiologists) - help make sure your heart is healthy and not impacted by your ILO symptoms.
• Other medical professionals may be involved in your care as we discover more about what is causing your symptoms.

How do we treat ILO?

Your doctor will make treatment recommendations after your appointment. Depending on what triggers your ILO symptoms, the treatment plan may include:

• **Speech Therapy** - to learn breathing exercises to control ILO. You will learn correct breathing, how to relax the throat muscles, and how to manage your symptoms. You may also learn how to suppress unnecessary coughing and throat clearing.
• **Evaluation of medicines** - so we can recommend new ones and or adjust them. This may include trying medicines to treat upper airway irritations.
• **Diet changes** - if you have irritated vocal cords or gastroesophageal reflux, we may recommend changes in your diet and eating habits.
• **Counseling** - to help you adjust to a new diagnosis and treatment program.

How soon will I improve?

You may begin feeling better after 1 to 3 treatment sessions. You will have to work every day to learn what triggers your ILO. You will also learn how to reduce the number of ILO episodes and how to do breathing exercises to prevent more ILO symptoms. It is best for you to learn these skills when you are not having trouble breathing. If you have trouble breathing during school or sports, talk to your teachers or coaches, so they can help you manage your difficult breathing. If your breathing does not respond well in speech therapy, your therapist (SLP) may recommend an exercise clinic, which examines your throat and breathing patterns during exercise tasks.
**Summary**

ILO is common and treatable. Your treatment program will be tailored to your needs. Your family must make a commitment to work as part of the team. You can help by taking medicine, keeping appointments and practicing daily as advised by your team of medical providers. Together, we can help stop disruptions to your life due to ILO.

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**Who can I call with questions?**

To get started, please call Speech and Language Services at 206-987-2104.